



08-19-04

IPW

PTO/SB/21 (08-00)

Please type a plus sign (+) inside this box → ☐

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

**TRANSMITTAL
FORM**

(to be used for all correspondence after initial filing)

TRANSMITTAL FORM (to be used for all correspondence after initial filing)	Application Number	10/808,117	
	Filing Date	March 24, 2004	
	First Named Inventor	Gunter	
	Group Art Unit	2882	
	Examiner Name	Unassigned	
Total Number of Pages in This Submission		Attorney Docket Number	6301.00002

ENCLOSURES (check all that apply)

<input type="checkbox"/> Fee Transmittal Form <input type="checkbox"/> Fee Attached <input type="checkbox"/> Amendment / Response <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input checked="" type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Response to Missing Parts/ Incomplete Application <input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Assignment Papers (for an Application) <input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s) _____	<input type="checkbox"/> After Allowance Communication to Group <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input type="checkbox"/> Appeal Communication to Group (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input checked="" type="checkbox"/> Other Enclosure(s) (please identify below): PTO/SB/08a (3 pages) 48 References Return Receipt Postcard Express Mail Certificate			
<table border="1"><tr><td>Remarks</td><td rowspan="2">The Commissioner is authorized to charge any fees in connection with this correspondence to Deposit Account No. 19-0733. A duplicate of this sheet is enclosed. Express Mail No. EV 306401331 US</td></tr><tr><td></td></tr></table>			Remarks	The Commissioner is authorized to charge any fees in connection with this correspondence to Deposit Account No. 19-0733. A duplicate of this sheet is enclosed. Express Mail No. EV 306401331 US	
Remarks	The Commissioner is authorized to charge any fees in connection with this correspondence to Deposit Account No. 19-0733. A duplicate of this sheet is enclosed. Express Mail No. EV 306401331 US				

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual name	Kenneth F. Smolik Banner & Witcoff, Ltd.
Signature	<i>Kenneth F. Smolik</i>
Date	August 18, 2004

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.



Please type a plus sign (+) inside this box → ☐

PTO/SB/21 (08-00)

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

TRANSMITTAL FORM <i>(to be used for all correspondence after initial filing)</i>	Application Number	10/808,117	
	Filing Date	March 24, 2004	
	First Named Inventor	Gunter	
	Group Art Unit	2882	
	Examiner Name	Unassigned	
Total Number of Pages in This Submission		Attorney Docket Number	6301.00002

ENCLOSURES (check all that apply)		
<input type="checkbox"/> Fee Transmittal Form <input type="checkbox"/> Fee Attached <input type="checkbox"/> Amendment / Response <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input checked="" type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Response to Missing Parts/ Incomplete Application <input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Assignment Papers (for an Application) <input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s) _____	<input type="checkbox"/> After Allowance Communication to Group <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input type="checkbox"/> Appeal Communication to Group (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input checked="" type="checkbox"/> Other Enclosure(s) (please identify below): PTO/SB/08a (3 pages) 48 References Return Receipt Postcard Express Mail Certificate
Remarks The Commissioner is authorized to charge any fees in connection with this correspondence to Deposit Account No. 19-0733. A duplicate of this sheet is enclosed. Express Mail No. EV 306401331 US		

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT	
Firm or Individual name	Kenneth F. Smolik Banner & Witcoff, Ltd.
Signature	
Date	August 18, 2004

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

(Attorney Docket No. 006301.00002)

In re U.S. Patent Application of Gunter)	
)	
Application No. 10/808,117)	Group Art Unit: 2882
)	
Filed: March 24, 2004)	Examiner: Unassigned
)	
FOR: FILTERED BACKPROJECTION)	Confirmation No. 4509
ALGORITHMS FOR COMPTON CAMERAS)	
IN NUCLEAR MEDICINE)	
)	

INFORMATION DISCLOSURE STATEMENT

Commissioner of Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Pursuant to 37 CFR §1.97 and 1.98, the Applicant wishes to make the following references of record in the above-identified application. This Information Disclosure Statement is in compliance with the continuing duty of candor as set forth in 37 CFR §1.56. Copies of the references cited below are enclosed. The references are also listed on the enclosed and completed form PTO/SB/08A.

This Information Disclosure Statement is filed under 37 CFR §1.97(b) within three months of this application's filing date or before the mailing date of a first Office Action on the merits. Accordingly, there is no fee due for filing this Information Disclosure Statement.

Under 37 CFR §1.97(g), the filing of this Information Disclosure Statement shall not be construed as a representation that a search has been made.

Under 37 CFR §1.97(h), the filing of this Information Disclosure Statement shall not be construed to be an admission that the cited references are, or are considered to be, material to patentability as defined in 37 CFR §1.56(b).

REFERENCES

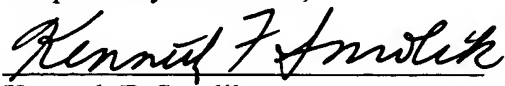
- A.C. Sauve, A.O. Hero, III, W.L. Rogers, S.J. Wilderman and N.H. Clinthorne, "3D Image Reconstruction for a Compton SPECT Camera Model," IEEE Transactions on Nuclear Science, Vol. 46, No. 6, pp. 2075-2084, December 1999
- C.E. Ordonez, W. Chang and Al. Bolozdynya, "Angular Uncertainties Due to Geometry and Spatial Resolution in Compton Cameras," IEEE Transactions on Nuclear Science, Vol. 46, No. 4, pp. 1142-1147, August 1999
- C.H. Hua, N.H. Clinthorne, S.J. Wilderman, J.W. LeBlanc and W.L. Rogers, "Quantitative Evaluation of Information Loss for Compton Cameras," IEEE Transactions on Nuclear Science, Vol. 46, No. 3, pp. 587-593, June 1999
- C.J. Solomon and R.J. Ott, "Gamma Ray Imaging with Silicon Detectors – A Compton Camera for Radionuclide Imaging in Medicine," Nuclear Instruments and Methods in Physics Research, A273, pp. 787-792 (1988)
- D. Doria and M. Singh, "Comparison of Reconstruction Algorithms for an Electronically Collimated Gamma Camera," IEEE Transactions on Nuclear Science, Vol. NS-29, No. 1, pp. 447-451, February 1982
- F. Biggs, L.B. Mendelsohn, J.B. Mann, "Hartree-Fock Compton Profiles for the Elements," Atomic Data and Nuclear Data Tables, Vol. 16, No. 3, pp. 201-206, September 1975
- G. Matscheko, G.A. Carlsson and R. Ribberfors, "Compton Spectroscopy in the Diagnostic X-Ray Energy Range. II Effects of Scattering Material and Energy Resolution," Phys. Med. Biol., Vol. 34, No. 2, pp. 199-208, September 1988
- J. Pauli, E.-M. Pauli, and G. Anton, "ITEM—QM Solutions for EM Problems in Image Reconstruction Exemplary for the Compton Camera," Nuclear Instruments and Methods in Physics Research, A488, pp. 323-331 (2002)
- J.B. Martin, G.F. Knoll, D.K. Wehe, N. Dogan, V. Jordanov, N. Petrick and M. Singh, "A Ring Compton Scatter Camera for Imaging Medium Energy Gamma Rays," IEEE Transactions on Nuclear Science, Vol. 40, No. 4, pp. 972-978, August 1993
- J.B. Martin, N. Dogan, J.E. Gormley, G.F. Knoll, M. O'Donnell and D.K. Wehe, "Imaging Multi-Energy Gamma-Ray Fields with a Compton Scatter Camera," IEEE Transactions on Nuclear Science, Vol. 41, No. 4, pp. 1019-1025, August 1994
- J.D. Kurfess, "Compton Scatter Imaging in Astrophysics," IEEE Transactions on Nuclear Science, Vol. 45, No. 3, pp. 936-942, June 1988
- J.D. Valentine, C. Bonnerave and R.C. Rohe, "Energy-Subtraction Compton Scatter Camera Design Considerations: A Monte Carlo Study of Timing and Energy Resolution Effects," IEEE Transactions on Nuclear Science, Vol. 44, No. 3, pp. 1134-1139, June 1997
- J.E. Gormely, W.L. Rogers, N.H. Clinthorne, D.K. Wehe and G.F. Knoll, "Experimental Comparison of Mechanical and Electronic Gamma-Ray Collimation," Nuclear Instruments and Methods in Physics Research, A397, pp. 440-447 (1997)

- J.W. LeBlanc, N.H. Clinthorne, C. Hua, W.L. Rogers, D.K. Wehe, S.J. Wilderman, "*A Compton Camera for Nuclear Medicine Applications Using ^{113m}In* ," Nuclear Instruments and Methods in Physics Research, A422, pp. 735-739 (1999)
- J.W. LeBlanc, N.H. Clinthorne, C-H Hua, E. Nygard, W.L. Rogers, D.K. Weh, P. Weilhammer and S.J. Wilderman, "*C-SPRINT: A Prototype Compton Camera System for Low Energy Gamma Ray Imaging*," IEEE Transactions on Nuclear Science, Vol. 45, No. 3, pp. 943-949, June 1998
- J.W. LeBlanc, N.H. Clinthorne, C-H Hua, E. Nygard, W.L. Rogers, D.K. Wehe, P. Weilhammer, S.J. Wilderman, "*Experimental Results from the C-SPRINT Prototype Compton Camera*," IEEE Transactions on Nuclear Science, Vol. 46, No. 3, pp. 201-204, June 1999
- L.C. Parra, "*Reconstruction of Cone-Beam Projections from Compton Scattered Data*," IEEE Transactions on Nuclear Science, Vol. NS-47, pp. 1543-1550 (2000)
- M. Hirasawa, T. Tomitani and S. Shibata, "*New Analytical Method for Three Dimensional Image Reconstruction in Multitracer Gamma-Ray Emission Imaging; Compton Camera for Multitracer*," RIKEN Review No. 35, pp. 118-119, May 2001, Focused on New Trends in Bio-Trace Elements Research
- M. Singh and D. Doria "*An Electronically Collimated Gamma Camera for Single Photon Emission Computed Tomography, Part II: Image Reconstruction and Preliminary Experimental Measurements*," Medical Physics, Vol. 10, No. 4, pp. 428-435, July/August 1983
- M. Singh and D. Doria "*Germanium-Scintillation Camera Coincidence Detection studies for Imaging Single Photon Emitters*," IEEE Transactions on Nuclear Science, Vol. NS-31, No. 1, pp. 594-598, February 1984
- M. Singh and D. Doria "*Single Photon Imaging with Electronic Collimation*," IEEE Transactions on Nuclear Science, Vol. NS-32, No. 1, pp. 843-847, February 1985
- M. Singh and R.R. Brechner, "*Experimental Test-Object Study of Electronically Collimated SPECT*," The Journal of Nuclear Medicine, Vol. 31, No. 2, pp. 178-186, February 1990
- M. Singh, "*An Electronically Collimated Gamma Camera for Single Photon Emission Computed Tomography, Part I: Theoretical Considerations and Design Criteria*," Medical Physics, Vol. 10, No. 4, pp. 421-427, July/August 1983
- M. Singh, R. Leahy, R. Brechner and T. Hebert, "*Noise Propagation in Electronically Collimated Single Photon Imaging*," IEEE Transactions on Nuclear Science, Vol. 35, No. 1, pp. 772-777, February 1988
- M.G. Scannavini, R.D. Speller, G.J. Royle, I. Cullum, M. Raymond, G. Halland G. Iles, "*A Possible Role for Silicon Microstrip Detectors in Nuclear Medicine: Compton Imaging of Positron Emitters*," Nuclear Instruments and Methods in Physics Research, A477, pp. 514-520 (2002)

- M.J. Cree and P.J. Bones, "Towards Direct Reconstruction from a Gamma Camera Based on Compton Scattering," IEEE Transactions on Medical Imaging, Vol. 13, No. 2, pp. 398-407, June 1994
- N. Dogan, K.D. Wehe and A.Z. Akcasu, "A Source Reconstruction Method for Multiple Scatter Compton Cameras", IEEE Transactions on Nuclear Science, Vol. 39, No. 5, pp. 1427-1430, October 1992
- N.H. Clinthorne, C. Ng, J. Strobel, C. Hua, J.W. LeBlanc, S.J. Wilderman and W.L. Rogers, "Determining Detector Requirements for Medical Imaging Applications," Nuclear Instruments and Methods in Physics Research, A489, pp. 501-507 (1998)
- N.H. Clinthorne, S.J. Wilderman, C. Hua, J.W. LeBlanc and W.L. Rogers, "Choice of Scattering Detector for Compton-Scatter Cameras," Journal of Nuclear Medicine, Vol. 39, No. 5, Proceedings of the 45th Annual Meeting, Scientific Papers, No. 193, May 1998 Supplement
- P. von Ballmoos, R. Diehl, and V. Schönfelder, "Imaging the Gamma-Ray Sky with Compton Telescopes," Astronomy and Astrophysics, pp. 396-406, February 1989
- R. Basko, G.L. Zeng, and G.T. Gullberg, "Analytical Reconstruction Formula for One-Dimensional Compton Camera," IEEE Transactions on Nuclear Science, Vol. 44, No. 3, pp. 1342-1346, June 1977
- R. Basko, G.L. Zeng, and G.T. Gullberg, "Application of Spherical Harmonics to Image Reconstruction for the Compton Camera," Phys. Med. Biol. 43, pp. 887-894 (1998)
- R. Diehl, "The Comptel Experiment on the NASA Gamma-Ray Observatory," Space Science Reviews 49, pp. 85-106, June 1988
- R.A. Kroeger, W.N. Johnson, J.D. Kurfess and B.F. Philips, "Gamma Ray Polarimetry Using a Position Sensitive Germanium Detector," Nuclear Instruments and Methods in Physics Research, A436, pp. 165-169 (1999)
- R.C. Rohe and J.D. Valentine, "An Energy-Subtraction Compton Scatter camera Design for In Vivo Medical Imaging of Radiopharmaceuticals," IEEE Transactions on Nuclear Science, Vol. 43, No. 6, pp. 3256-3263, December 1996
- R.C. Rohe, M.M. Sharfi, K.A. Kecvar, J.D. Valentine and C. Bonnerave, "The Spatially-Variant Backprojection Point Kernel Function of an Energy-Subtraction Compton Scatter Camera for Medical Imaging," IEEE Transactions on Nuclear Science, Vol. 44, No. 6, pp. 2477-2482, December 1977
- R.R. Brechner and M. Singh, "Reconstruction of Electronically Collimated Images Obtained from Single Photon Emitters Using a Spherical System of Coordinates," IEEE Transactions on Nuclear Science, Vol. 33, No. 1, pp. 583-586, February 1986
- R.R. Brechner and Manbir Singh, "Iterative Reconstruction of Electronically Collimated Spect Images," IEEE Transactions on Nuclear Science, Vol. 37, No. 3, pp. 1328-1332, June 1990

- R.R. Brechner, M. Singh and R. Leahy, "Computer Simulated Studies of Tomographic Reconstruction with an Electronically Collimated Camera for Spect," IEEE Transactions on Nuclear Science, Vol. NS-34, No. 1, pp. 369-373, February 1987
- R.W. Todd, J.M. Nightingale and D.B. Everett, "A Proposed γ Camera," Nature, Vol. 251, pp. 132-134, September 1974,
- S.J. Wilderman, W.L. Rogers, G.F. Knoll and J.C. Engdahl, "Fast Algorithm for List Mode Back-Projection of Compton Scatter Camera Data," IEEE Transactions on Nuclear Science, Vol. 45, No. 3, pp. 957-962, June 1998
- T. Hebert, R. Leahy and M. Singh, "Three-Dimensional Maximum-Likelihood Reconstruction for an Electronically Collimated Single-Photon-Emission Imaging System," Optical Society of America, Vol. 7, No. 7, pp. 1305-1313, July 1990
- T. Kamae, N. Hanada and R. Enomoto, "Prototype Design of Multiple Compton Gamma-Ray Camera," IEEE Transactions on Nuclear Science, Vol. 35, No. 1, pp. 352-355, February 1988
- T. Kamae, R. Economoto and N. Hanada, "A New Method to Measure Energy, Direction, and Polarization of Gamma Rays." Nuclear Instruments and Methods in Physics Research, A260, pp. 254-257 (1987)
- T. Tomitani and M. Hirasawa, "Image Reconstruction from Limited Angle Compton Camera Data", Phys. Med. Biol. 47, pp. 2129-2145 (2002)
- V. Schönfelder, R. Diehl, G.G. Lichti, H. Steinle, B.N. Swanenburg, A.J.M. Deerenberg, H. Aarts, J. Lockwood, W. Webber, J. Macri, J. Ryan, G. Simpson, B.G. Taylor, K. Bennett and M. Snelling, "The Imaging Compton Telescope Comptel on the Gamma Ray Observatory," IEEE Transactions on Nuclear Science, Vol. NS-31, No. 1, pp. 766-770, February 1984
- V. Schönfelder, U. Graser and R. Diehl, "Properties and Performance of the MPI Balloon Borne Compton Telescope," Astronomy and Astrophysics, pp. 138-151, February 1982
- Y.F. Yang, Y. Gono, S. Motomura, S. Enomoto, and Y. Yano, "Monte Carlo Simulations of the Performance of a Compton Camera Consisting of Position-Sensitive Germanium Detectors," Nuclear Instruments and Methods in Physics Research, A482, pp. 806-813 (2002)

Date: August 18, 2004

Respectfully submitted,
 By: 
 Kenneth F. Smolik
 Registration No. 44,344
 BANNER & WITCOFF, LTD.
 10 South Wacker Drive, Suite 3000
 Chicago, Illinois 60606
 Telephone: 312-463-5000
 Facsimile: 312-463-5001



PTO/SB/08a (08-03)

Approved for use through 07/31/2006. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet

of

Complete if Known

Application Number	10/808,117
Filing Date	March 24, 2004
First Named Inventor	Gunter
Art Unit	2882
Examiner Name	Unassigned
Attorney Docket Number	6301.00002

U.S. PATENT DOCUMENTS

Examiner Initials *	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number - Kind Code ² (if known)			
		US-			

FOREIGN PATENT DOCUMENTS

Examiner Initials *	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Country Code ³ - Number ⁴ - Kind Code ⁵ (if known)				

NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	1	A.C. Sauve, A.O. Hero, III, W.L. Rogers, S.J. Wilderman and N.H. Clinthorne, "3D Image Reconstruction for a Compton SPECT Camera Model," IEEE Transactions on Nuclear Science, Vol. 46, No. 6, pp. 2075-2084, December 1999	
	2	C.E. Ordenez, W. Chang and Al. Bolozdynya, "Angular Uncertainties Due to Geometry and Spatial Resolution in Compton Cameras," IEEE Transactions on Nuclear Science, Vol. 46, No. 4, pp. 1142-1147, August 1999	
	3	C.H. Hua, N.H. Clinthorne, S.J. Wilderman, J.W. LeBlanc and W.L. Rogers, "Quantitative Evaluation of Information Loss for Compton Cameras," IEEE Transactions on Nuclear Science, Vol. 46, No. 3, pp. 587-593, June 1999	
	4	C.J. Solomon and R.J. Ott, "Gamma Ray Imaging with Silicon Detectors - A Compton Camera for Radionuclide Imaging in Medicine," Nuclear Instruments and Methods in Physics Research, A273, pp. 787-792 (1988)	
	5	D. Doria and M. Singh, "Comparison of Reconstruction Algorithms for an Electronically Collimated Gamma Camera," IEEE Transactions on Nuclear Science, Vol. NS-29, No. 1, pp. 447-451, February 1982	
	6	F. Biggs, L.B. Mendelsohn, J.B. Mann, "Hartree-Fock Compton Profiles for the Elements," Atomic Data and Nuclear Data Tables, Vol. 16, No. 3, pp. 201-206, September 1975	
	7	G. Matscheko, G.A. Carlsson and R. Ribberfors, "Compton Spectroscopy in the Diagnostic X-Ray Energy Range. II Effects of Scattering Material and Energy Resolution," Phys. Med. Biol., Vol. 34, No. 2, pp. 199-208, September 1988	
	8	J. Pauli, E.-M. Pauli, and G. Anton, "ITEM-QM Solutions for EM Problems in Image Reconstruction Exemplary for the Compton Camera," Nuclear Instruments and Methods in Physics Research, A488, pp. 323-331 (2002)	
	9	J.B. Martin, G.F. Knoll, D.K. Wehe, N. Dogan, V. Jordanov, N. Petrick and M. Singh, "A Ring Compton Scatter Camera for Imaging Medium Energy Gamma Rays," IEEE Transactions on Nuclear Science, Vol. 40, No. 4, pp. 972-978, August 1993	
	10	J.B. Martin, N. Dogan, J.E. Gormley, G.F. Knoll, M. O'Donnell and D.K. Wehe, "Imaging Multi-Energy Gamma-Ray Fields with a Compton Scatter Camera," IEEE Transactions on Nuclear Science, Vol. 41, No. 4, pp. 1019-1025, August 1994	
	11	J.D. Kurfess, "Compton Scatter Imaging in Astrophysics," IEEE Transactions on Nuclear Science, Vol. 45, No. 3, pp. 936-942, June 1988	
	12	J.D. Valentine, C. Bonnerave and R.C. Rohe, "Energy-Subtraction Compton Scatter Camera Design Considerations: A Monte Carlo Study of Timing and Energy Resolution Effects," IEEE Transactions on Nuclear Science, Vol. 44, No. 3, pp. 1134-1139, June 1997	

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	13	J.E. Gormely, W.L. Rogers, N.H. Clinthorne, D.K. Wehe and G.F. Knoll, "Experimental Comparison of Mechanical and Electronic Gamma-Ray Collimation," Nuclear Instruments and Methods in Physics Research, A397, pp. 440-447 (1997)	
	14	J.W. LeBlanc, N.H. Clinthorne, C. Hua, W.L. Rogers, D.K. Wehe, S.J. Wilderman, "A Compton Camera for Nuclear Medicine Applications Using ^{113m} IN," Nuclear Instruments and Methods in Physics Research, A422, pp. 735-739 (1999)	
	15	J.W. LeBlanc, N.H. Clinthorne, C-H Hua, E. Nygard, W.L. Rogers, D.K. Weh, P. Weilhammer and S.J. Wilderman, "C-SPRINT: A Prototype Compton Camera System for Low Energy Gamma Ray Imaging," IEEE Transactions on Nuclear Science, Vol. 45, No. 3, pp. 943-949, June 1998	
	16	J.W. LeBlanc, N.H. Clinthorne, C-H Hua, E. Nygard, W.L. Rogers, D.K. Wehe, P. Weilhammer, S.J. Wilderman, "Experimental Results from the C-SPRINT Prototype Compton Camera," IEEE Transactions on Nuclear Science, Vol. 46, No. 3, pp. 201-204, June 1999	
	17	L.C. Parra, "Reconstruction of Cone-Beam Projections from Compton Scattered Data," IEEE Transactions on Nuclear Science, Vol. NS-47, pp. 1543-1550 (2000)	
	18	M. Hirasawa, T. Tomitani and S. Shibata, "New Analytical Method for Three Dimensional Image Reconstruction in Multitracer Gamma-Ray Emission Imaging; Compton Camera for Multitracer," RIKEN Review No. 35, pp. 118-119, May 2001, Focused on New Trends in Bio-Trace Elements Research	
	19	M. Singh and D. Doria "An Electronically Collimated Gamma Camera for Single Photon Emission Computed Tomography, Part II: Image Reconstruction and Preliminary Experimental Measurements," Medical Physics, Vol. 10, No. 4, pp. 428-435, July/August 1983	
	20	M. Singh and D. Doria "Germanium-Scintillation Camera Coincidence Detection studies for Imaging Single Photon Emitters," IEEE Transactions on Nuclear Science, Vol. NS-31, No. 1, pp. 594-598, February 1984	
	21	M. Singh and D. Doria "Single Photon Imaging with Electronic Collimation," IEEE Transactions on Nuclear Science, Vol. NS-32, No. 1, pp. 843-847, February 1985	
	22	M. Singh and R.R. Brechner, "Experimental Test-Object Study of Electronically Collimated SPECT," The Journal of Nuclear Medicine, Vol. 31, No. 2, pp. 178-186, February 1990	
	23	M. Singh, "An Electronically Collimated Gamma Camera for Single Photon Emission Computed Tomography, Part I: Theoretical Considerations and Design Criteria," Medical Physics, Vol. 10, No. 4, pp. 421-427, July/August 1983	
	24	M. Singh, R. Leahy, R. Brechner and T. Hebert, "Noise Propagation in Electronically Collimated Single Photon Imaging," IEEE Transactions on Nuclear Science, Vol. 35, No. 1, pp. 772-777, February 1988	
	25	M.G. Scannavini, R.D. Speller, G.J. Royle, I. Cullum, M. Raymond, G. Halland G. Iles, "A Possible Role for Silicon Microstrip Detectors in Nuclear Medicine: Compton Imaging of Positron Emitters," Nuclear Instruments and Methods in Physics Research, A477, pp. 514-520 (2002)	
	26	M.J. Cree and P.J. Bones, "Towards Direct Reconstruction from a Gamma Camera Based on Compton Scattering," IEEE Transactions on Medical Imaging, Vol. 13, No. 2, pp. 398-407, June 1994	
	27	N. Dogan, K.D. Wehe and A.Z. Akcasu, "A Source Reconstruction Method for Multiple Scatter Compton Cameras," IEEE Transactions on Nuclear Science, Vol. 39, No. 5, pp. 1427-1430, October 1992	
	28	N.H. Clinthorne, C. Ng, J. Strobel, C. Hua, J.W. LeBlanc, S.J. Wilderman and W.L. Rogers, "Determining Detector Requirements for Medical Imaging Applications," Nuclear Instruments and Methods in Physics Research, A489, pp. 501-507 (1998)	
	29	N.H. Clinthorne, S.J. Wilderman, C. Hua, J.W. LeBlanc and W.L. Rogers, "Choice of Scattering Detector for Compton-Scatter Cameras," Journal of Nuclear Medicine, Vol. 39, No. 5, Proceedings of the 45 th Annual Meeting, Scientific Papers, No. 193, May 1998 Supplement	
	30	P. von Ballmoos, R. Diehl, and V. Schönfelder, "Imaging the Gamma-Ray Sky with Compton Telescopes," Astronomy and Astrophysics, pp. 396-406, February 1989	
	31	R. Basko, G.L. Zeng, and G.T. Gullberg, "Analytical Reconstruction Formula for One-Dimensional Compton Camera," IEEE Transactions on Nuclear Science, Vol. 44, No. 3, pp. 1342-1346, June 1977	
	32	R. Basko, G.L. Zeng, and G.T. Gullberg, "Application of Spherical Harmonics to Image Reconstruction for the Compton Camera," Phys. Med. Biol. 43, pp. 887-894 (1998)	
	33	R. Diehl, "The Comptel Experiment on the NASA Gamma-Ray Observatory," Space Science Reviews 49, pp. 85-106, June 1988	
	34	R.A. Kroeger, W.N. Johnson, J.D. Kurfess and B.F. Philips, "Gamma Ray Polarimetry Using a Position Sensitive Germanium Detector," Nuclear Instruments and Methods in Physics Research, A436, pp. 165-169 (1999)	

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	35	R.C. Rohe and J.D. Valentine, "An Energy-Subtraction Compton Scatter camera Design for In Vivo Medical Imaging of Radiopharmaceuticals," IEEE Transactions on Nuclear Science, Vol. 43, No. 6, pp. 3256-3263, December 1996	
	36	R.C. Rohe, M.M. Sharfi, K.A. Kecvar, J.D. Valentine and C. Bonnerave, "The Spatially-Variant Backprojection Point Kernel Function of an Energy-Subtraction Compton Scatter Camera for Medical Imaging," IEEE Transactions on Nuclear Science, Vol. 44, No. 6, pp. 2477-2482, December 1977	
	37	R.R. Brechner and M. Singh, "Reconstruction of Electronically Collimated Images Obtained from Single Photon Emitters Using a Spherical System of Coordinates," IEEE Transactions on Nuclear Science, Vol. 33, No. 1, pp. 583-586, February 1986	
	38	R.R. Brechner and Manbir Singh, "Iterative Reconstruction of Electronically Collimated Spect Images," IEEE Transactions on Nuclear Science, Vol. 37, No. 3, pp. 1328-1332, June 1990	
	39	R.R. Brechner, M. Singh and R. Leahy, "Computer Simulated Studies of Tomographic Reconstruction with an Electronically Collimated Camera for Spect," IEEE Transactions on Nuclear Science, Vol. NS-34, No. 1, pp. 369-373, February 1987	
	40	R.W. Todd, J.M. Nightingale and D.B. Everett, "A Proposed γ Camera," Nature, Vol. 251, pp. 132-134, September 1974,	
	41	S.J. Wilderman, W.L. Rogers, G.F. Knoll and J.C. Engdahl, "Fast Algorithm for List Mode Back-Projection of Compton Scatter Camera Data," IEEE Transactions on Nuclear Science, Vol. 45, No. 3, pp. 957-962, June 1998	
	42	T. Hebert, R. Leahy and M. Singh, "Three-Dimensional Maximum-Likelihood Reconstruction for an Electronically Collimated Single-Photon-Emission Imaging System," Optical Society of America, Vol. 7, No. 7, pp. 1305-1313, July 1990	
	43	T. Kamae, N. Hanada and R. Enomoto, "Prototype Design of Multiple Compton Gamma-Ray Camera," IEEE Transactions on Nuclear Science, Vol. 35, No. 1, pp. 352-355, February 1988	
	44	T. Kamae, R. Economoto and N. Hanada, "A New Method to Measure Energy, Direction, and Polarization of Gamma Rays," Nuclear Instruments and Methods in Physics Research, A260, pp. 254-257 (1987)	
	45	T. Tomitani and M. Hirasawa, "Image Reconstruction from Limited Angle Compton Camera Data", Phys. Med. Biol. 47, pp. 2129-2145 (2002)	
	46	V. Schönfelder, R. Diehl, G.G. Lichti, H. Steinle, B.N. Swanenburg, A.J.M. Deerenberg, H. Aarts, J. Lockwood, W. Webber, J. Macri, J. Ryan, G. Simpson, B.G. Taylor, K. Bennett and M. Snelling, "The Imaging Compton Telescope Comptel on the Gamma Ray Observatory," IEEE Transactions on Nuclear Science, Vol. NS-31, No. 1, pp. 766-770, February 1984	
	47	V. Schönfelder, U. Graser and R. Diehl, "Properties and Performance of the MPI Balloon Borne Compton Telescope," Astronomy and Astrophysics, pp. 138-151, February 1982	
	48	Y.F. Yang, Y. Gono, S. Motomura, S. Enomoto, and Y. Yano, "Monte Carlo Simulations of the Performance of a Compton Camera Consisting of Position-Sensitive Germanium Detectors," Nuclear Instruments and Methods in Physics Research, A482, pp. 806-813 (2002)	

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

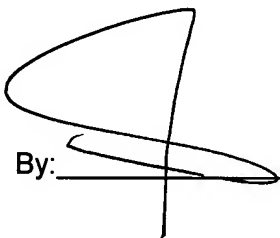


CERTIFICATE OF EXPRESS MAIL
(PATENT)

Attorney Docket No. 006301.00002

Express Mail No. EV 306401331 US
Deposited August 18, 2004

I hereby certify that the attached correspondence, identified below, is being deposited with the United States Postal Service as "Express Mail Post Office to Addressee" under 37 CFR §1.10 on the date indicated above and is addressed to Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

By: 

Gunter, U.S. Patent Application for No. 10/808,117 "FILTERED BACKPROJECTION ALGORITHMS FOR COMPTON CAMERAS IN NUCLEAR MEDICINE"

- Transmittal Form (in duplicate)
- Information Disclosure Statement (6 Pages)
- PTO/SB/08a (3 pages)
- 48 References
- Return Receipt Postcard